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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/859,640	05/18/2001	Rafi Rabipour	85773-374	3891

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EXAMINER

FLANDERS, ANDREW C

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/859,640

Applicant(s)

RABIPOUR ET AL.

Examiner

Andrew C. Flanders

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments, filed 13 May 2005, with respect to the rejection(s) of claim(s) 1 - 40 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is listed below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 , 2, 4 – 14, 16 – 28, 30 – 38 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Fitzgerald (U.S. Patent 6,466,548)

Regarding **Claim 1**, Fitzgerald discloses:

A method for controlling an operative setting of a communications link, the communications link being capable of acquiring a plurality of operative settings (abstract and the text references cited below), said method comprising:

a) comparing audio quality in the communications link under different operative settings (i.e. determining the QoS for voice packets in a network by analyzing different routers delays; col. 4 lines 15 - 34);

b) selecting an operative setting at least in part on the basis of the comparing in a) (i.e. once the location and source of the QoS problems is identified steps are taken to correct it such as setting priority bits in the audio packets; col. 5 lines 21 – 30);

c) sending a control signal (i.e. the priority) to at least one component (i.e. the router) in the communications link to cause the communications link to attempt to acquire the selected setting (i.e. increasing the priority of the audio packets within the router thus changing the queuing; col. 5 lines 21 – 30).

Regarding **Claims 13, 25 and 40**, they are interpreted and thus rejected for the same reasons as set forth above in claim 1. Since claims 13, 25 and 40 disclose an apparatus, which corresponds to, the method of claim 1., the apparatuses are interpreted as simply providing functionality for the structure of claim 1.

Regarding **Claim 27**, it is interpreted and thus rejected for the same reasons as set forth above in claim 1. Since claim 27 discloses a computer readable medium, which corresponds to, the method of claim 1., the computer readable medium is interpreted as simply providing functionality for the structure of claim 1.

Regarding **Claim 2, 14 and 28**, in addition to the elements stated above regarding claims 1, 13 and 27, Fitzgerald further discloses:

wherein audio quality is a measure of actual audio quality of the communications link under different operative settings (i.e. packets are sent out and looped back to determine the delay; col. 4 lines 22 – 34).

Regarding **Claims 4, 17 and 31**, in addition to the elements stated above regarding claims 1, 13 and 27, Fitzgerald further discloses:

wherein the communications link comprises a plurality of components (i.e. Fig. 2 routers, the various routers),

said method comprising sending a control signal to the plurality of components in the communications link to cause the communications link to acquire the selected setting (i.e. the packet with the increased priority bits is sent to at least three routers which will then queue the packets according to the set priority; Rb, Rc, and Re, or Ra, Rd, and Re Fig. 2).

Regarding **Claims 5, 16 and 30**, in addition to the elements stated above regarding claim 1, Fitzgerald further discloses:

a) deriving measurements of a certain characteristic of an audio signal for respective operative settings, the certain characteristics characterizing at least in part audio quality (i.e. determining the delay in the network for voice packets in order to determine QoS; col. 4 lines 15 – 21);

b) comparing the measurements in a) to select an operative setting (i.e. if there is a large delay detected and the problem is congestion, priority bits are set in the audio packets to place them higher in the queue in the routers; col. 5 lines 21 – 30).

Regarding **Claim 6, 18 and 32**, in addition to the elements stated above regarding claims 5, 16 and 31, Fitzgerald further discloses:

wherein the certain characteristic is selected from the set consisting of a measure of echo, measure of delay, the signal level, a measure of the information loss and noise (i.e. determining the delay in the network; col. 4 lines 15 – 21).

Regarding **Claims 7, 19 and 33**, in addition to the elements stated above regarding claim 5, Fitzgerald further discloses:

a) deriving measurements for a set of characteristics of an audio signal for respective operative settings, each characteristic in the set of characteristics characterizing at least in part audio quality under a given operative setting (i.e. determining the delay in the network of multiple routers for voice packets in order to determine QoS; col. 4 lines 15 – 21);

b) comparing the measurements derived in a) to select an operative setting (i.e. if there is a large delay detected and the problem is congestion, priority bits are set in the audio packets to place them higher in the queue in the routers; col. 5 lines 21 – 30).

Regarding **Claims 8, 20 and 34**, in addition to the elements stated above regarding claim 7, 19 and 33, Fitzgerald further discloses:

wherein the set characteristic includes at least one characteristic selected from the set consisting of a measure of echo, measure of delay, the signal level, a measure of information loss and noise (i.e. determining the delay in the network; col. 4 lines 15 – 21).

Regarding **Claims 9, 21 and 35**, in addition to the elements stated above regarding claims 1, 13 and 27, Fitzgerald further discloses:

wherein the communications link is capable of acquiring two operative settings namely a bypass setting and an active setting (i.e. non prioritized packets and prioritized packets);

when in the bypass setting the communications link transmitting an audio signal substantially unaltered (i.e. when there delay threshold is not exceeded the packets are transmitted normally without using the hop by hop loop back to determine a source of delay; col. 4 lines 16 – 22);

when in the active setting the communications link transmitting an audio signal subsequent to at least one processing operation on the audio signal (i.e. if there is a large delay detected and the problem is congestion, priority bits are set in the audio packets to place them higher in the queue in the routers; col. 5 lines 21 – 30).

Regarding **Claims 10, 22 and 36**, in addition to the elements stated above regarding claims 9, 21 and 35, Fitzgerald further discloses:

a) providing a data element indicative of a measure of effectiveness associated with the at least one processing operation on the audio signal (i.e. determining the delay in the network of multiple routers for voice packets in order to determine QoS; col. 4 lines 15 – 21);

b) selecting a setting at least in part on the basis of the measure of effectiveness of the at least one processing operation (i.e. if there is a large delay detected and the problem is congestion, priority bits are set in the audio packets to place them higher in the queue in the routers; col. 5 lines 21 – 30).

Regarding **Claims 11, 23 and 37**, in addition to the elements stated above regarding claims 10, 22 and 36, Fitzgerald further discloses:

wherein said measure of effectiveness is used to assess a degree of improvement in audio quality over an audio quality associated with the bypass setting (i.e. different router queuing techniques can be selected to more efficiently process the audio packets; col. 5 lines 26 – 27).

Regarding **Claims 12, 24 and 38**, in addition to the elements stated above regarding claims 11, 22 and 37, Fitzgerald further discloses:

selecting the active setting when the measure of effectiveness is above a certain threshold of effectiveness (i.e. if there is a large delay detected and the problem is

Art Unit: 2644

congestion, priority bits are set in the audio packets to place them higher in the queue in the routers; col. 5 lines 21 – 30).

Regarding **Claim 26**, in addition to the elements stated above regarding claim 25, Fitzgerald further discloses:

wherein the at least one processing operation is selected from the set consisting of echo cancellation, noise reduction, noise conditioning, information loss management and signal level adjustment (i.e. the delay is calculated to fix the QoS by ensuring the packets arrive on time; col. 5 lines 21 – 30)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 15 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fitzgerald (U.S. Patent 6,466,548).

Regarding **Claims 3, 15 and 29**, in addition to the elements stated above regarding claims 1, 13 and 27, Fitzgerald discloses wherein audio quality is a measure of actual audio quality of the communications link under different operative settings (i.e.

Art Unit: 2644

packets are sent out and looped back to determine the delay; col. 4 lines 22 – 34).

Fitzgerald does not disclose using estimation to derive the quality of the input signal.

However, using estimation is an obvious implementation choice to one of ordinary skill in the art at the time of the invention. One of ordinary skill in the art would have been motivated to estimate the quality in order to save on processing time and thus create a system that would be further suited to operate in real time.

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fitzgerald (U.S. Patent 6,466,548) in view of Xiang (U.S. Patent 6,574,469).

Regarding **Claim 39**, in addition to the elements stated above regarding claims 1, 13, 25, 27, and 40, Fitzgerald does not disclose a tandem-free operation or enabling a tandem-free operation of the communication link selectively.

Xiang discloses:

a tandem-free operation and enabling a tandem-free operation of the communication link selectively (i.e. tandem-free operation is enabled when two VOIP users are connected and the encoding is determined; col. 1 lines 20 – 41).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add a tandem-free mode such as the one disclosed by Xiang to Fitzgerald's system. One would have been motivated to do so to reduce transmission costs and improve speech quality in a VOIP environment such as the one disclosed by Fitzgerald; see Xiang col. 1 lines 10 – 16.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Flanders whose telephone number is (571) 272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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